GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:1229
ANSWERED ON:25.02.2003
FORECASTING OF CYCLONE
YEMPARALA VENKATESWARA RAO

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether there is any mechanism to forecast cyclones in advance;

(b) if so, the details thereof and the number of days in advance cyclone forecasting is being done presently; (

(c) whether the Government have taken any steps to improve the accuracy of cyclone forecasts; and

(d) if so, the details thereof?

Answer

MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY(SHRI BACHI SINGH RAWAT)

(a) to (d) : A Statement is attached.

STATEMENT AS REFERRED IN REPLY TO PARTS (a) TO (d) OF LOK SABHA UNSTARRED QUESTION NO.1229 DUE FOR 25.2.2003 REGARDING `FORECASTING OF CYCLONE`

Yes, Sir. The India Meteorological Department (IMD) has established a cyclone warning system for the country and six cyclone warning centres are in operation at Kolkata, Bhubaneswar, Visakhapatnam, Chennai, Mumbai and Ahmedabad covering the entire Indian coastline. IMD follows a four-stage warning system for tropical cyclone. A `Pre-cyclone Watch` is issued upto 4 days in advance whenever a depression forms over the Indian Seas. This is followed bya `Cyclone Alert` issued 2-3 days in advance. In the third stage, cyclone warnings are issued 1-2 days in advance which specify the expected place and time of landfall of the tropical cyclone. The final stage is known as ` Post-landfall Outlook` which is issued 12 hours in advance of landfall.

The accuracy of cyclone forecasts issued by IMD is generally on par with the accuracy of such forecastsissued by the tropical cyclone forecast services of other countries. However, with the development of new observing systems such as buoys, Doppler Radars and new generation satellites, these forecasts are likely to improve further.

Three Doppler Weather Radars (DWRs) have started functioning along the east coast at Chennai, Sriharikota and Kolkata. Three more such radars are to be installed at Paradip, Visakhapatnam and Machillipatnam. The DWR has the capability of providing the velocity structure of tropical cyclones.

In order to strengthen the observing system further 20 High Wind Speed Recorders also have recently been installed at the coastal stations.

A dedicated Indian geostationary meteorological satellite (now named Kalpana-I) was launched in September, 2002 and is providing high resolution cloud imageries in the Visible, IR and Water Vapour channels. Similarly the new satellite in the INSAT series, INSAT-3A, planned for launch in the early 2003 will provide 1 km resolution imagery.

Numerical model for tropical cyclone track prediction is already operational.